V2410

Verafix-MES-II

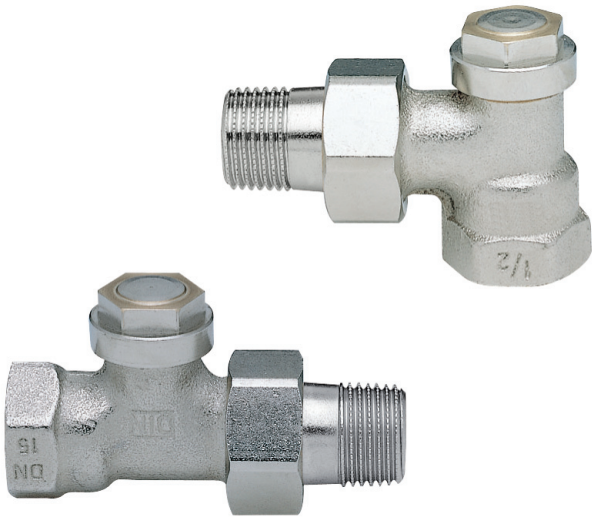
Lockshield valve with measuring facility

APPLICATION

The Verafix-MES-II is a radiator lockshield valve with measuring support for the supply or return of radiators or heat exchangers. It is used for measuring, shut-off and draining/filling of individual radiators in two-pipe heating systems. In combination with a presettable TRV body the Honeywell Home measuring method can be applied: measuring and presetting at the same time.

Installation in supply also possible, draining/filling function isn´t supported.

The Verafix-MES-II is suitable for hot water heating systems and cold water cooling systems.



FEATURES

- Measuring and presetting at the same time
- Measuring, shut-off and draining/filling with one valve
- Optional flow direction. Performance values apply for both directions
- Piston externally O-ring sealed
- Body dimensions to DIN3842
- Robust corrosion-resistant red bronze housing
- Connection to all types of pipe DN10 - DN20
- Easy identification: cover cap with hexagon and raised circular centre; also see illustrations identification

SPECIFICATIONS

Medium:	Quality to VDI2035 Water, water-glycol mixture	
Operating temperature:	2 - 130 °C (36 - 266 °F)	
Operating pressure:	PN10	
k_{VS}(cv)-values:	Angle	1.0 (1.17)
	Straight DN10	0.8 (0.94)
	Straight DN15	0.9 (1.05)
	Straight DN20	1.0 (1.17)

DESIGN

The lockshield valve consists of:

- Valve housing PN10, DN10, 15 or 20 with
  - internal thread connection to DIN2999 (ISO7) or external thread connection to DIN/ISO228 on inlet
  - external thread connection to DIN/ISO228 with union-nut and radiator tailpiece (not V2406) on outlet
  - Body dimensions to DIN3842
- Valve insert
- Protection cap

MATERIALS

- Valve housing made of nickel-plated red bronze
- Valve insert made of brass with EPDM seals
- Tailpiece, protection cap and union-nut made of nickel-plated brass

FUNCTION

The Verafix-MES-II connects the return of a radiator or heat exchanger to the water loop and has the functions measuring, shut-off and draining/filling.

Measuring:

To measure the flow the VA3301A measuring adapter is connected to the Verafix-MES-II and a measuring device, for example BasicMES is connected to the measuring adapter. Presetting of the required flow rate is done using the Honeywell Home measuring method: the water quantity is measured and is then adjusted as required on the presettable V, FV or SC type TRV. Closing or opening of the TRV is immediately indicated on the measuring device as a lower or higher flow rate.

The Verafix-MES-II has two fixed kv-values: measuring range II (standard) and measuring range I for low flow rates. The valve is supplied set to measuring range II.

For correct measurements the right measuring range or k_v-value has to be fed into the measuring device. Also see chapter 'Flow Diagram'.

Note: Measuring and presetting at the same time can only be done when a presettable TRV body is installed, e.g. Honeywell Home VS, FS, FV or SC type.

Shut-off:

The return of the radiator can be shut-off by closing the valve insert.

Draining:

Detailed illustrations of above functions see chapter Shut-off/Draining and Change to Measuring Range I

Draining or filling of the radiator is carried out with the draining adapter (see 'Accessories'). Draining of individual radiators using the Verafix-MES-II has no influence on the heating loop or other radiators in the loop.

PLEASE NOTE:

- To avoid stone deposit and corrosion the composition of the medium should conform with VDI-Guideline 2035
- Additives have to be suitable for EPDM sealings
- System has to be flushed thoroughly before initial operation with all valves fully open
- Any complaints or costs resulting from non-compliance with above rules will not be accepted by Honeywell Home
- Please contact us if you should have any special requirements or needs

DIMENSIONS AND ORDERING INFORMATION

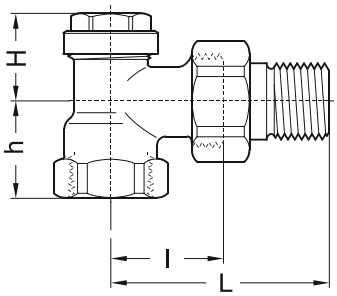


Fig. 1. Angle

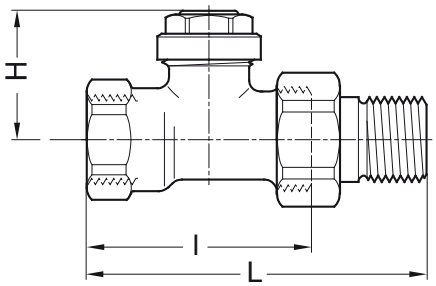


Fig. 2. Straight

Tab. 1 Dimensions and OS-Nos (OS=Ordering System)

Type	DN	Pipe connection	$k_{vs}(c_{vs})$-value	L	l	H	h	OS-No.
Angle	10	Rp $^3/_8$"	0.2/1.0 (0.23/1.17)	52	26	25	22	V2410E0010
(Fig. 1)	15	Rp $^1/_2$"	0.2/1.0 (0.23/1.17)	58	29	25	26	V2410E0015
	20	Rp $^3/_4$"	0.2/1.0 (0.23/1.17)	66	34	29	29	V2410E0020
Straight	10	Rp $^3/_8$"	0.2/0.8 (0.23/0.94)	75	49	32	-	V2410D0010
(Fig. 2)	15	Rp $^1/_2$"	0.2/0.9 (0.23/1.05)	80	51	32	-	V2410D0015
	20	Rp $^3/_4$"	0.2/1.0 (0.23/1.17)	91	59	32	-	V2410D0020

Note: All dimensions in mm unless stated otherwise.

INSTALLATION EXAMPLE

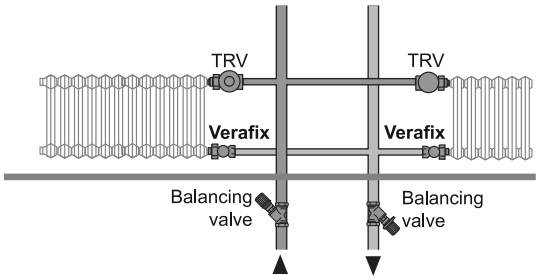


Fig. 3. Installation example heating system

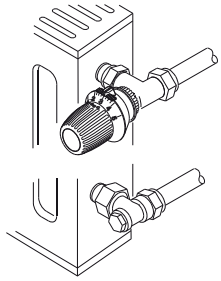
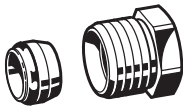
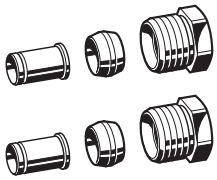
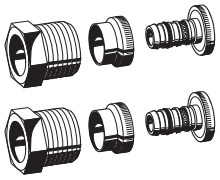


Fig. 4. Installation example radiator

ACCESSORIES

	Description		Dimension	Part No.
	**VA620**	**Compression fitting for copper and soft steel pipe** Consisting of compression nut and compression ring; for ports with internal thread, 1 pcs. Note: Support inserts have to be used for copper or soft steel pipe with 1.0 mm wall thickness		
		DN10	3/8" x 10 mm	VA620A1010
		DN10	3/8" x 12 mm	VA620A1012
		DN15	1/2" x 10 mm	VA620A1510
		DN15	1/2" x 12 mm	VA620A1512
		DN15	1/2" x 14 mm	VA620A1514
		DN15	1/2" x 15 mm	VA620A1515
		DN15	1/2" x 16 mm	VA620A1516
		DN20	3/4" x 18 mm	VA620A2018
		DN20	3/4" x 22 mm	VA620A2022
	**VA621**	**Compression fitting for copper and soft steel pipe** Consisting of compression nut, compression ring and support insert; for ports with internal thread; 2 pcs. Note: Support inserts have to be used for copper or soft steel pipe with 1.0 mm wall thickness		
			3/8" x 12 mm	VA621A1012
			1/2" x 12 mm	VA621A1512
			1/2" x 15 mm	VA621A1515
			1/2" x 16 mm	VA621A1516
			3/4" x 18 mm	VA621A2018
	**VA622**	**Compression fitting for multiskin pipe** Consisting of compression nut, ring and support insert; for ports with internal thread 1/2"; 2 pcs.		
		1/2" (DN15)	14 mm	VA622B1514
		1/2" (DN15)	16 mm	VA622B1516
	**VA5201Axxx**	**Radiator tailpiece with thread up to collar**		
		for valves DN10 (3/8")		VA5201A010
		for valves DN15 (1/2")		VA5201A015
		for valves DN20 (3/4")		VA5201A020
	**VA5204Bxxx**	**Extended radiator tailpiece, nickel-plated, to be shortened as required**		
		3/8" x 70 mm (for DN10) thread approx. 50 mm		VA5204B010
		1/2" x 76 mm (for DN15) thread approx. 65 mm		VA5204B015
		3/4" x 70 mm (for DN20) thread approx. 60 mm		VA5204B020
	**VA5230**	**Soldering tailpiece**		
		for DN10	3/8" x 12 mm	VA5230A010
		for DN15	1/2" x 15 mm	VA5230A015
		for DN20	3/4" x 22 mm	VA5230A020
	**VA3300**	**Draining adapter**		
		for all sizes		VA3300A001

	**VA8300**	**Verafix-key**		
		for all sizes		VA8300A001
	**VA3301**	**Measuring adapter**		
		for all sizes		VA3301A001
	**VM200**	**Flow Meter**		
		for Verafix-MES and Kombi-3-Plus		VM200A1001
	**VM242A**	**BasicMes-2 handheld measuring computer** Note: To connect the VM241 BasicMes to SafeCon™ pressue test cocks please order measuring adapter VA3600C001 separately.		
		Computer is supplied with case and accessories	for all sizes	VM242A0101
	**VM241**	**BasicMES handheld measuring computer**		
		for all sizes, computer is supplied with case and accessories		VM241A1002

SERVICE PARTS

	**Cover cap**		
	for all sizes		VS3301B001
	**Sealing ring for cover cap**		
	for all sizes		VS3302A001
	**Exchange valve insert**		
			VS1300VM01

	**Pressure cap – for shutting off valves on radiator outlet**	
	for valves DN10 ($^3/_8$")	VA2202A010
	for valves DN15 ($^1/_2$")	VA2202A015
	for valves DN20 ($^3/_4$")	VA2202A020
	**Sealing ring for pressure cap**	
	for valves DN10 ($^3/_8$")	VA5090A010
	for valves DN15 ($^1/_2$")	VA5090A015
	for valves DN20 ($^3/_4$")	VA5090A020

IDENTIFICATION

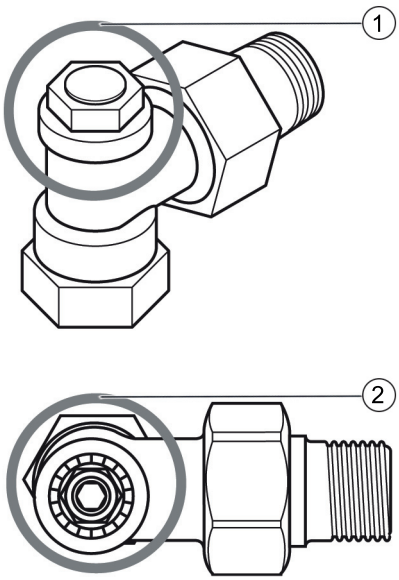
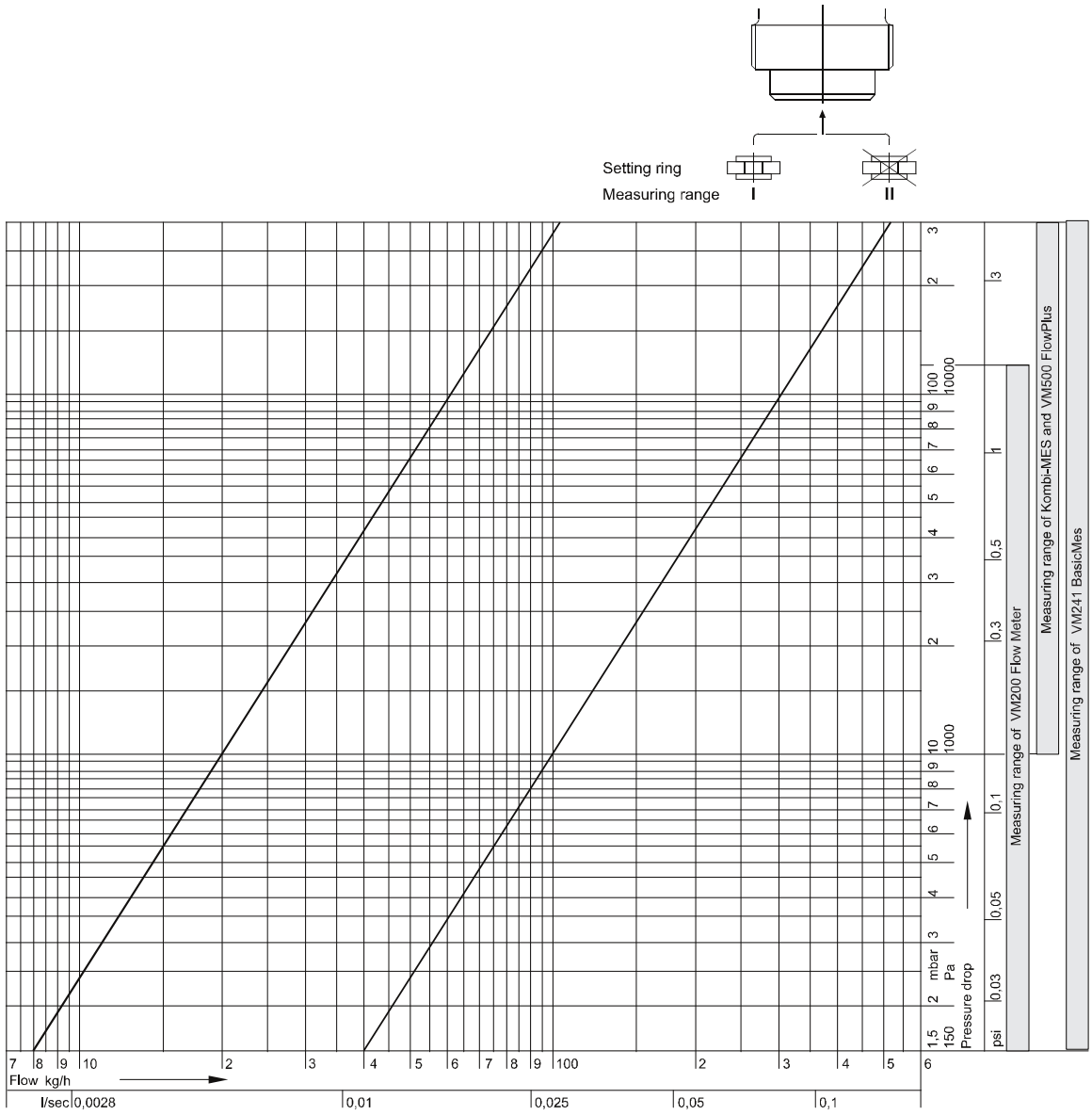


Fig. 5. Identification of Verafix-MES-II

1) Protection cap fitted: protection cap with hexagon (SW19), raised circular centre on top and collar on valve side
2) Protection cap removed: valve insert with ribbed rim and two inside hexagons (SW10 and SW4)

FLOW DIAGRAM



Flow values (cv-values in brackets)

Nominal size diameter	DN10		DN15		DN20	
Measuring range	I	II	I	II	I	II
Angle (Fig. 1)	0.2 (0.23)	1.0 (1.17)	0.2 (0.23)	1.0 (1.17)	0.2 (0.23)	1.0 (1.17)
Straight (Fig. 2)	0.2 (0.23)	0.8 (0.94)	0.2 (0.23)	0.9 (1.05)	0.2 (1.05)	1.0 (1.17)

For more information

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